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EXAMINER

ALLISON, ANDRAE S

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

05/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/736,888

Applicant(s)

CHEW, KHIEH MEOW DAVID

Examiner

Andrae S. Allison

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on December 16, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 16, 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, 35-41 and 51 are rejected under 35 U.S.C. 102(e) as being anticipated by Franz (US Patent No.: 6,856,344).

As to independent claim 38, Franz discloses a method for automatically inspecting a vehicle (inspecting a vehicle's undercarriage; column 1, lines 15-17) being driven into a first area (e.g. border check points, see column 1, line 54), the method comprising: capturing an image (see Fig 12) of an undercarriage of the vehicle as the vehicle is being driven into the first area (column 12, lines 12-22); and comparing the captured image of the undercarriage of the vehicle being driven into the first area with at least one stored image of undercarriages of vehicles which are permitted into the first area (column 12, lines 23-29).

As independent claim 1, this claim differs from claim 38 only in that claim 1 is apparatus whereas, claim 38 is method and the limitations imaging means, a database

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means for storing images of undercarriages of vehicles which are permitted into the first area and means for comparing the captured image of the undercarriage of the vehicle being driven into the first area with at least one of the stored images of the undercarriages of vehicles in the database means additively recited. Franz clearly discloses a system (see Fig 1) comprising: imaging means (100, see Fig 1), a database means (82, see Fig 16) for storing images of undercarriages of vehicles which are permitted into the first area and means for comparing (166, see Fig 16) the captured image of the undercarriage of the vehicle being driven into the first area with at least one of the stored images of the undercarriages of vehicles in the database means (column 15, lines 33-55).

As to independent claim 37, all the limitations are discussed above except: a vehicle access control system comprising a plurality of apparatuses for automatically inspecting vehicles being driven into different first areas, wherein the apparatuses are networked together. Franz clearly disclose a vehicle access control system (see Fig 1) comprising a plurality of apparatuses for automatically inspecting vehicles being driven into different first areas, wherein the apparatuses are networked together (81, see Fig 8).

As to claim 39, Franz discloses the method wherein the capturing step comprises: capturing a series of overlapping images of different areas of the undercarriage of the vehicle (column 12, lines 51-67); and stitching the series of images

of different areas of the undercarriage, to form a composite (see Fig 12) complete undercarriage image (column 12, lines 12-29).

As to claim 40, Franz discloses the method wherein 40, further comprising: inputting an identification (e.g. VIN, column 15, lines 41-42) of a vehicle being driven into the first area; comparing the captured image of the undercarriage of the vehicle with at least one stored image associated with the identification of the vehicle being driven into the first area (column 15, lines 33-55); highlighting if there are discrepancies between the compared captured image and at least one stored image (see Fig 13); and triggering an alert when a discrepancy is determined (column 16, lines 22-27).

As to claim 41, Franz discloses the method wherein, wherein inputting an identification of a vehicle comprises reading an identification number on a vehicle number plate (see column 15, lines 56-60).

As to claim 51, Franz discloses the method wherein, further comprising detecting a presence of explosives associated with the vehicle that is being driven into the first area (column 16, lines 31-43).

As to claim 2, Franz discloses the apparatus wherein the imaging means comprises an area-scan camera for capturing a series of images of different areas of the undercarriage of the vehicle (column 11, lines 44-67); and means for stitching the

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series of images of different areas of the undercarriage, to form a composite (see Fig 12) undercarriage image (column 12, lines 1-34).

As to claim 3, Franz discloses the apparatus wherein individual images of the series of images are overlapping images (column 11, lines 44-67).

As to claim 4, Franz discloses the apparatus wherein the composite undercarriage image is a complete undercarriage image (see Fig 12).

As to claim 5, Franz discloses the apparatus, wherein the database means further stores vehicle identification data (82, see Fig 16) of vehicles permitted into the first area in association with the images of the undercarriages of those vehicles.

As to claim 6, Franz discloses the apparatus, further comprising: means for inputting an identification of a vehicle being driven into the first area (column 15, lines 40-50); and wherein the means for comparing is operable to compare the captured image of the undercarriage of the vehicle with at least one of the stored images associated with the identification of the vehicle being driven into the first area and to highlight discrepancies therebetween (column 15, lines 32-55).

As to claim 7, Franz discloses the apparatus, further comprising means for triggering an alerting mechanism when the means for comparing highlights

discrepancies (column 31-43).

As to claim 35, Franz discloses the apparatus wherein the vehicle is a motor vehicle (see Fig 6).

As to claim 36, Franz discloses the apparatus 1, wherein the first area is a secure site (e.g. border check points, see column 1, lines 64).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10-16, 18-21, 25-29, 32-34, 42-43 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franz (US Patent No.: 6,856,344) in view of Bazakos et al (US Patent No.: 7,183,895).

As to independent claim 43 all the limitations are discussed above except capturing identification data about a driver who is driving the vehicle into the first area; and based on captured identification data about the driver who is driving the vehicle into the first area, captured number plate data, and driver identification data identifying drivers who are permitted to drive vehicles into the first area, determining whether the driver is permitted to drive the vehicle into the first area. Franz does not expressly

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disclose capturing identification data about a driver who is driving the vehicle into the first area and based on captured identification data about the driver who is driving the vehicle into the first area, captured number plate data, and driver identification data identifying drivers who are permitted to drive vehicles into the first area, determining whether the driver is permitted to drive the vehicle into the first area.

Bazakos discloses a method for security identification (column 1, lines 7-9) that includes the step of capturing identification data about a driver who is driving the vehicle (see column 4, lines 27-33 and column 6, lines 60-67 where, a camera captures the face of driver in a vehicle) into the first area and based on captured identification data about the driver who is driving the vehicle into the first area, captured number plate data, and driver identification data identifying drivers who are permitted to drive vehicles into the first area, determining whether the driver is permitted to drive the vehicle into the first area (note that based on the identification of the driver, a vehicle tag reader and identification data identifying permitted driver is the vehicle and driver allow or denied access to a gate, see column 6, lines 60-67 and column 7, lines 1-31).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have modified the vehicle inspection method of Franz with the method for security identification of Bazakos for determining using facial recognition and vehicle identification of vehicle with a driver to grant or deny access to certain area for e.g. border crossing or secure facilities such as military of government installation. Furthermore, using the method of Bazakos would automate the driver identification

process, thereby making access control and vehicle inspection more secure and efficient.

As independent claim 14, this claim differs from claim 43 only in that claim 14 is apparatus whereas, claim 43 is method and the limitations database means containing: driver identification data, number plate data identifying vehicles, data identifying which driver is permitted to bring which vehicle into the secure site; means for capturing identification data, number plate recognition means and means for interrogating the database means additively recited. Franz discloses a system (see Fig 1) comprising: database means (see Fig 16) containing: driver identification data, number plate data identifying vehicles (165. see Fig 6), data identifying which driver is permitted to bring which vehicle into the secure site; means for capturing identification data, number plate recognition means and means for interrogating the database means. However, Franks does not expressly disclose driver identification data, means for capturing identification data, number plate recognition means and means for interrogating the database means. Bazakos disclose a security identification system having driver identification data (66, see Fig 6), means for capturing identification data (53, see Fig 5), number plate recognition means (22, see Fig 2) and means for interrogating (54, see Fig 5) the database means. Thus combining Franz with Bazakos would meet the claim limitation for the same reasons as discussed with respect to claim 43 above.

As to claim 42, note the discussion of claim 14 above.

As to claim 45, note the discussion above, Bazakos teaches the method, wherein capturing identification data about a driver comprises capturing biometrics data from the driver comprising a facial image of each such driver (see column 4, lines 28-30).

As to claim 46, note the discussion above, Bazakos teaches the method wherein: capturing identification data comprises detecting physiological data about the driver who is driving the vehicle; and further comprising: inferring, from the detected physiological data, information about a current psychological profile of the driver; and triggering an alerting mechanism when the inferred current psychological profile of the driver matches specified criteria (see column 5, lines 33-54).

As to claims 10-15, note the discussion of claim 14 above.

As to claim 16, note the discussion above, Bazakos teaches the apparatus, wherein the driver identification data for a driver comprises information from a personal identification card (RFID personnel tag).

As to claim 18, note the discussion above, Bazakos teaches the apparatus, wherein the driver identification data for a driver comprises biometrics data (facial image; see column 4, lines 28-30) of the driver.

As to claim 19, note the discussion above, Bazakos teaches the apparatus, wherein the biometrics data identifying drivers who are permitted to drive vehicles into the first area comprises a facial image of each such driver (see column 4, lines 28-30).

As to claim 20, note the discussion above, Bazakos teaches the apparatus wherein the means for capturing identification data about a driver is operable to capture driver biometrics data (23, see Fig 2).

As to claim 21, note the discussion above, Bazakos teaches the apparatus wherein: the means for capturing identification data comprises means for detecting physiological data (e.g. facial image; see column 4, lines 28-30) about the driver who is driving the vehicle; and further comprising: means for inferring (24, see Fig 2), from the detected physiological data, information about a current psychological profile of the driver (see column 5, lines 33-54); and means for triggering (25, see Fig 2) an alerting mechanism when the inferred current psychological profile of the driver matches specified criteria (see column 5, lines 33-54).

As to claim 25, neither Franz or Bazakos teach the apparatus in which the apparatus is arranged in three zones, comprising: an identification and psychological profiling zone, in which the means for capturing identification data about the driver is located; an automatic inspection zone, in which the imaging means for capturing an image of the undercarriage of the vehicle is located; and a manual inspection zone.

However, it would have been obvious to have the apparatus arranged in three zones, so that the vehicle and driver can be thoroughly check. Furthermore, the three zones provide three layers of security, thereby allowing security officials enough time to react to a threat if necessary (OFFICIAL NOTICE).

As to claims 26-28, neither Franz or Bazakos teach the apparatus further comprising means, under control of the apparatus, for selectively preventing and allowing movement of the vehicle from the identification and psychological profiling zone into the automatic inspection zone, selectively preventing and allowing movement of the vehicle from the automatic inspection zone into the manual inspection zone and selectively preventing and allowing movement of the vehicle from the manual inspection zone into the first area. However, it would have been obvious to have an under control of the apparatus, for selectively preventing and allowing the movement of the vehicle through all three zones to immobilized the vehicle during the inspection process so if that if either the vehicle or the driver fails the inspection process, neither is allow to access to the secured area. Furthermore, under control of the apparatus allow security officials enough time to react to a threat if necessary (OFFICAL NOTICE).

As to claim 29, neither Franz or Bazakos teach the apparatus in which components of the apparatus that are located in at least one of: the identification and psychological profiling zone; the automatic inspection zone; and the manual inspection zone, are hardened against the effects of explosive blast. However, it would have been

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obvious to have the three zones hardened against the effects of explosive blast so that if during the inspection process, an explosion occurs, the blast is confined only to the inspection area. Also, hardening the three zones protects the security officials and the secure site (OFFICAL NOTICE).

As to claims 32-34, neither Franz or Bazakos teach the apparatus further comprising means for detecting a presence of explosives associated with the vehicle that is being driven into the first area located in at least one of the automatic inspection zone and the manual inspection zone and the means for detecting the presence of explosives include at least one of portable explosives detection devices and a detecting portal through which the vehicle is driven. However, it would have been obvious to have including in the inspection apparatus means for detecting a presence of explosives which includes a portable explosives detection devices so that if a vehicle contained explosives or have explosive devices attached to it, the device can detect it and alert security officials. Moreover, including a portable explosive detection device such as a robot enables the security official to remotely diffuse a threat and if the explosive detonates, only the mobile device will be destroyed, therefore the use of mobile detection devices save lives (OFFICAL NOTICE).

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5. Claims 21, 23-24 and 47 – 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franz (US Patent No.: 6,856,344) in view of Bazakos et al (US Patent No.: 7,183,895) further in view of Seal et al (US Patent No.: 6,549,118).

As to claim 21, Neither Franz or Bazakos disclose the apparatus as claimed which the specified criteria include a stress level of the driver. Seal discloses a apparatus for providing a security check (column 1, lines 6-10), wherein the specified criteria include a stress level of the driver (note that voice samples which can determine the stress level of an individual, see column 1, line 31-33). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have modified the vehicle inspection apparatus of Franz as modified by Bazakos with the apparatus for providing a security check of Seal for determining using digital signature whether a person is authorized to pass a security check (see column 2, lines 19-22), for e.g. border crossing or secure facilities such as military of government installation. Furthermore, using the apparatus for providing a security check of Seal would automate the driver identification process, thereby making access control and vehicle inspection more secure and efficient.

As to claim 23, note the discussion above, Seal teaches the apparatus in which the physiological data includes voice characteristic data of the driver (see column 1, line 31-33).

As to claim 24, note the discussion above, Seal teaches the apparatus in which:

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the apparatus further includes means for storing voice characteristic data about the driver (170, see Fig 2); and the means for inferring the current psychological profile of the driver from the detected physiological data includes means for comparing the detected voice characteristic of the driver with the stored voice characteristic data for the driver (210, see Fig 2).

Claim 47 differ from claim 23 only in that claim 23 is an apparatus claim whereas, claim 47 is a method claim. Thus, claim 47 is analyzed as previously discussed with respect to claim 23 above.

Claim 48 differ from claim 24 only in that claim 24 is an apparatus claim whereas, claim 48 is a method claim. Thus, claim 48 is analyzed as previously discussed with respect to claim 24 above.

6. Claims 8-9, 30 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franz (US Patent No.: 6,856,344) in view of Tilsley (US Patent No.: 6,970,576).

As to claim 8, Franz does not expressly disclose the apparatus wherein the means for inputting an identification of a vehicle comprises means for reading an identification number on the vehicle. Tilsley discloses a surveillance apparatus (column 1, lines 10-13) wherein the means for inputting an identification of a vehicle comprises means for reading an identification number on the vehicle (see Fig 2). At the time of the

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invention, it would have been obvious to a person of ordinary skill in the art to have modified the vehicle inspection apparatus of Franz with the surveillance apparatus of Tilsley for capturing a vehicle license plate and carry out number recognition to determine whether to grant or denied a vehicle access to a sure area such as border crossing or secure facilities such as military of government installation. Furthermore, using the apparatus would automate number identification process, thereby making access control and vehicle inspection more secure and efficient.

As to claim 9, note the discussion above, Tilsley teaches the apparatus wherein the means for reading comprises number plate recognition means for reading a number on a vehicle number plate (see Fig 2).

As to claim 30, note the discussion above, Tilsley teaches the apparatus wherein the number plate recognition means includes a number plate recognition camera (4, see Fig 1).

As to claim 42, note the discussion above, Tilsley teaches the apparatus capturing identification data about a driver comprises capturing data from a personal identification card (see Fig 2).

7. Claims 17, 31, 49-50, and 52-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franz (US Patent No.: 6,856,344) in view of Bazakos et al (US Patent No.: 7,183,895) further in view of Tilsley (US Patent No.: 6,970,576).

As to claim 17, neither Franz or Bazakos teaches the apparatus wherein the means for capturing identification data about a driver is operable to capture data from a driver's personal identification card. Tilsley discloses a surveillance apparatus (column 1, lines 10-13) wherein the means for capturing identification data about a driver is operable to capture data from a driver's personal identification card (see Fig 2). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have modified the vehicle inspection apparatus of Franz as modified by Bazakos with the surveillance apparatus of Tilsley for capturing a driver's personal identification card and carry out character recognition to determine whether to grant or denied the driver access to a sure area such as border crossing or secure facilities such as military of government installation. Furthermore, using the apparatus would automate driver identification process, thereby making access control and vehicle inspection more secure and efficient

As to claim 31, note the discussion above, Tilsley teaches the apparatus further comprising a number plate recognition camera (C2, see Fig 2) for capturing number plate data about the vehicle being driven into the first area; and wherein the vehicle is visible to the number plate recognition camera on entry of the vehicle into the identification and psychological profiling zone; and on detection by the number plate

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recognition camera of the vehicle entering into the identification and psychological profiling zone. However, neither Franz, Bazakos or Tilsley disclose the number plate recognition camera is triggered to capture number plate data about the vehicle.

However, it would have been obvious to have the number plate recognition camera is triggered to capture number plate data about the vehicle so that the camera can capture the license number when the license plate is in proper focus relative to the camera so that number recognition can be carry out to determine whether the vehicle should be denied or granted access to a secure area (OFFICIAL NOTICE).

As to claim 49, note the discussion of claim 31 above.

Claim 50 differ from claim 26 only in that claim 26 is an apparatus claim whereas, claim 50 is a method claim. Thus, claim 50 is analyzed as previously discussed with respect to claim 26 above.

As to independent claim 51, all the limitations are discussed above except;; wherein allowable outcomes of the at least one inspection process in the first inspection zone comprise: (i) the vehicle failing the at least one inspection process and: (a) the vehicle not being permitted to move out of the first inspection zone; or (b) the vehicle being allowed to leave without proceeding into the first area; and (ii) the vehicle passing the at least one the inspection process and being permitted to move out of the first inspection zone into a second one of the inspection zones; and if the vehicle has

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entered the second inspection zone conducting at least one other inspection process on the vehicle in the second inspection zone; wherein allowable outcomes of the at least one other inspection process in the second inspection zone comprise: (iii) the vehicle failing the at least one inspection process and: (c) the vehicle not being permitted to move out of the second inspection zone; or (d) the vehicle being allowed to leave without proceeding into the first area; and (iv) the vehicle passing the at least one other inspection process and being permitted to move out of the second inspection zone.

Neither Franz, Bazakos or Tilsley disclose the above limitations. However it would have been obvious to include in the inspection apparatus exit at in all three zone so that if the vehicle fails any of the inspection test, the vehicle is allow to leave the inspection site without gaining any access to the secure area. Moreover, in each zone there are only two possible outcomes, the vehicle either fail or pass the inspection test (OFFICIAL NOTICE).

As to claim 53, note the discussion of claim 19 above.

As to claim 54, note the discussion of claim 51 above.

Conclusion

The prior art made part of the record and not relied upon is considered pertinent to applicant's disclosure.

Chandler et al (US Patent No.: 7,102,665) is cited to teach a vehicle underbody imaging system.

Siegel et al (US Patent No.: 7,102,665) is cited to teach a system and method utilizing biometric data.

Anthony et al (US Patent No.: 6,559,769) is cited to teach an early warning real-time security system.

Dickson et al (NPL document titled: "Mosaic generation for under vehicle inspection") is cited to teach an vehicle inspection system

Yeoman (NPL document titled: "Under Vehicle Examination and novel applications of Digital Storage Techniques") is cited to teach under vehicle examination system.

Inquires

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrae S. Allison whose telephone number is (571) 270-1052. The examiner can normally be reached on Monday-Friday, 8:00 am - 5:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571) 272-7695. The fax phone

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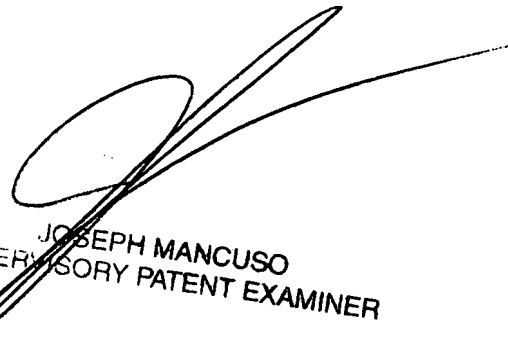
number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrae Allison

April 17, 2007

A.A.



JOSEPH MANCUSO
SUPERVISORY PATENT EXAMINER